

Safety Investigation Recommendations Follow-Up

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No Action Requested – Information Only



Recommendation List

Number	Recommendation	Status
WDR1	Establish operating procedures for bridge and gantry crane lifts.	Complete
WDRC1	Develop a standard lift plan for moving fixed hoist gates with gantry cranes.	Complete
WDRC2	Revise District Safety Program requirements for gantry and bridge crane operations. (Response combined with WDR1)	Complete
WDRC3	Revise the Spillway OMI to include a procedure for operation of fixed hoist gates and actions to open the swing rails when lifting a fixed hoist gate.	Complete
WDRC4	Develop District Standard for what a good Pre-Task Plan (PTP) looks like	Complete
WDRC5	Implement PTP including metrics and adjustments as needed	Complete
WDRC7	Develop and implement job planning requirements and standards to ensure that formal job planning is performed.	Complete
WDRC9	Evaluate the practice of using working foreman (evaluation complete, actions underway)	Complete

WD= WD Associates; TT= Tetra Tech; R=Recommendation; RC=Recommendation for Consideration

Recommendation List

Number	Recommendation	Status
WDRC8	Perform actions recommended in the Tetra Tech report to correct the design of the swing rails. (Immediate actions complete)	Complete
TTR2	Revise swing rail design	Complete
TTR3	Analyze interim modifications made to swing rails	Complete
TTRC1	Consider modifications to Crane 3 Block Leaders	Complete
TTRC2	Consider eliminating swing rails (will be addressed as part of modernization project)	Transferred

Results/Actions Taken:

- Installed proximity switches to detect upward swing rail movement
- Installed gusset brackets to physically prevent lifting of swing rails
- Provided a taper on ends of swing rails to prevent crane blocks from ‘catching’ the corner and lifting the rail.
- Installed strobe lights to indicate which auto gate is being operated
- Installed electronic warning lights/signs with audible alarms at spillway entrances to alert employees prior to crossing spillway deck
- Developed SOP’s and trained personnel to not cross spillway deck when gates are in operation
- Swing rail future use remains under evaluation in Spillway Modernization project

Recommendation List

Number	Recommendation	Status
WDR2	Conduct an independent survey of assessment of the Safety Concerns and Close Calls program (awareness, use, follow through) (Safety)	90% complete
WDRC6	Continue implementation of HPI tools (Safety)	Ongoing
TTR1	Inspect spillway bays with swing rails (scheduled to coincide with operations) (Ops). Wire rope, hoist mechanical components, gates, spillway concrete	Ongoing (4 of 11 complete)

Safety Concern and Close Call Program

SCOPE

Employee Assigned * i

Work Location

IDENTIFICATION

Type Safety Suggestion/Concern

Event Date * 09/13/2022 at 6:44 AM x Now i

Time Unknown

Do you wish to remain anonymous?

Reported by * i

Reported Date MM/DD/YYYY at HH:MM Am/Pm x Now

LOCATION

Occurred offsite/non-CCPUD property?

Location of the Event * i

Exact Location

DESCRIPTION

Description *

Submit

Independent assessment and survey conducted

- *Lucas Engineering (2019 & 2021)*

Additional Actions:

- Establish a degree of awareness for Incident Reporting & Investigation Standard (IRIS → ELS)
- Implementation of safety incident management software (GRC Enablon)
- Proposed completion by Q1-2023

Human Performance Improvement

Practical application of additional error-reduction tools

Intended Outcomes include:

Engaged employees

Reduction of significant incidents

Improvement of processes

- Proposed completion by Q1-2023

2022 HPI Fundamentals & Tools Training

- Pre-Task Plan
- After Action Review
- STAR
- STOP and Seek Out
- Peer Check

Engineering Controls

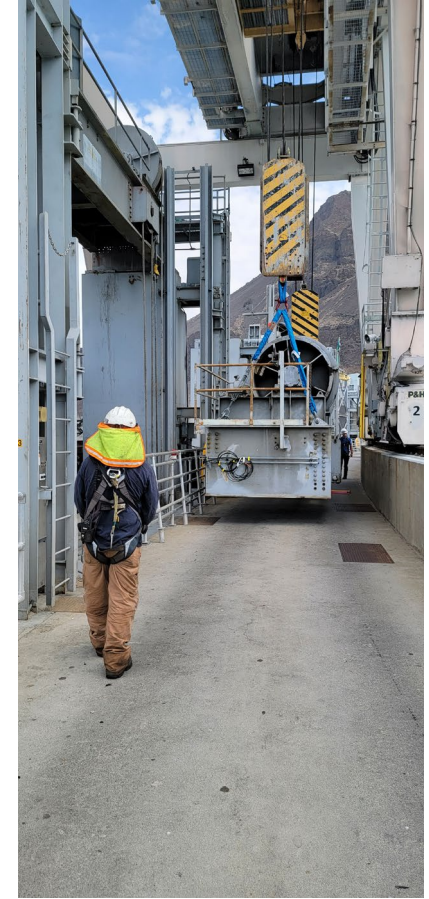
Spill Bay Inspection Process - Remove Wire Rope



TTR1

Engineering Controls

Spill Bay Inspection – Hoist Removal



Engineering Controls

Spill Bay Inspection Process – Stop Log Install



Engineering Controls

Spillway bay inspections



- 11 Spill bays with swing sails
- Inspect and document spill bay condition
- Make corrective repairs when needed
- 4 of 11 Completed (17, 20, 22, 25)
 - Bay 19 inspection is currently underway
- Scheduling 2 spill bay/hoist inspections per year until complete, est. 2025
- The inspections are extensive, taking about 2000 hours of labor to complete.

Questions?

